

ABSTRACT OF THE DISCLOSURE

To reduce the number of signal lines for connecting an current detector and a solenoid electrically.

Between solenoids 1-1 and 1-2 and switches SW-1 and SW-2 and on the high sides with respect to the individual solenoids, respectively, there are connected current detectors 4-1 and 4-2. The end portions of the solenoids 1-1 and 1-2 on the individual GND sides are made common. The number of signal lines for connecting a controller and the two solenoids may be " $2 + 1 = 3$ ". Therefore, the number of terminals (or the pin number) of a connector 3 may also be " $2 + 1 = 3$ " (P1 to P3). The current detectors 4-1 and 4-2 detect the electric currents to flow to the solenoids 1-1 and 1-2. In the case of an incomplete grounding, for example, it is possible to detect an overcurrent to flow to the solenoids.

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